

**SYSTEM AND METHOD FOR MULTIPLE CHANNEL VIDEO TRANSCODING****ABSTRACT OF THE DISCLOSURE**

A system and a method for transcoding multiple media channels is disclosed herein. The system includes a first processor to parse a media data stream having one or more media data channels and a vector processor to decompress, scale, and then compress the parsed media channel. A parsed media data channel, in one embodiment, is accessed using a bit manipulator and packetized into decoder instruction packets and transmitted to the vector processor using a sequencer. The vector processor decompresses the decoder instruction packets, scales a macroblock generated from the packets, and then compresses the scaled macroblock. As a result, the scaled and compressed output has less data associated with the media channel, allowing for faster and/or more efficient storage or transmission. A reduced sized scale buffer is associated with another disclosed embodiment.